

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A transmitting apparatus that power-amplifies a transmitting signal, the apparatus comprising transmitting power amplifying means having a high-frequency power amplifier, wherein the transmitting power amplifying means has a first mode of operating the high-frequency power amplifier as a nonlinear amplifier and a second mode of operating the high-frequency power amplifier as a linear amplifier, and in the first mode, amplitude modulates the transmitting signal and controls an average output level of the transmitting signal by a power supply voltage of the high-frequency power amplifier and, in the second mode, controls an average output level of the transmitting signal before the high-frequency power amplifier and amplitude modulates the transmitting signal having the average output level controlled; an amplitude modulated signal amplifier for selectively (i) supplying a substantially constant DC power supply voltage to the high-frequency amplifier in the second mode and (ii) amplifying and supplying an amplified, variable voltage amplitude-modulated signal as the power supply voltage to the high-frequency amplifier operating in the first mode; and a multiplier for generating a multiplied signal to be transmitted to the high-frequency power amplifier by multiplying a phase-modulated signal by an amplitude modulated signal.

Claim 2 (Previously presented): The transmitting apparatus as claimed in claim 1, wherein the multiplier is disposed before the high-frequency power amplifier and a variable gain amplifier is disposed before the multiplier, wherein, in the second mode, the transmitting power amplifying means amplitude modulates the transmitting signal by the multiplier and controls the average output level of the transmitting signal by the variable gain amplifier.

Claim 3 (Previously presented): The transmitting apparatus as claimed in claim 1, wherein an input level of the high-frequency power amplifier is changed according to an average output power of the transmitting signal in the first mode.

Claim 4 (Previously presented): The transmitting apparatus as claimed in claim 1, wherein an input level of the high-frequency power amplifier is changed according to an instantaneous output power of the transmitting signal in the first mode.

Claim 5 (Currently amended): A method of controlling a transmitting power when a transmitting signal is power amplified and outputted by a high-frequency power amplifier, the method comprising the steps of: separating from a base-band modulated signal an amplitude-modulated signal; operating the high-frequency power amplifier as a nonlinear amplifier in a first mode to amplitude modulate the transmitting signal and to control an average output level of the transmitting signal by controlling a power supply voltage of the high-frequency power amplifier, wherein said power supply voltage in the first mode is based at least in part on the amplitude-modulated signal separated from the base-band modulated signal; amplifying the amplitude-modulated signal separated from the base-band modulated signal with an amplitude-modulated signal amplifier to generate an amplified, variable voltage amplitude-modulated signal that is to be supplied; supplying the amplified amplitude-modulated signal as the power supply voltage to the high-frequency amplifier when operating in the first mode; establishing transmission of a substantially constant DC voltage to the amplitude-modulated signal amplifier as the power supply voltage when the high-frequency power amplifier is operating in a second mode, wherein transmitting from the amplitude-modulated signal amplifier a substantially constant voltage to be delivered as the power supply voltage to the high-frequency amplifier operating operates as a linear amplifier in the second mode operating the high frequency power amplifier as a linear amplifier in a second mode; and before the high-frequency power amplifier, controlling an average output level of the transmitting signal and amplitude modulating the transmitting signal having the average output level controlled.

Claim 6 (Previously presented): A radio communication apparatus for transmitting a transmitting signal from an antenna by radio, wherein the transmitting signal is power amplified by the transmitting apparatus as claimed in claim 1 and is outputted to the antenna.

Claim 7 (Previously presented): The transmitting apparatus as claimed in claim 1 further comprising a low-limit limiting circuit operable in the first mode to establish a minimum value of the amplitude modulated signal to maintain operation of the high-frequency power amplifier as the nonlinear amplifier.

Claim 8 (Currently amended): A transmitting apparatus that power-amplifies a transmitting signal, the apparatus comprising transmitting power amplifying means having a high-frequency power amplifier, wherein the transmitting power amplifying means has a first mode of operating the high-frequency power amplifier as a nonlinear amplifier and a second mode of operating the high-frequency power amplifier as a linear amplifier, and in the first mode, amplitude modulates the transmitting signal in a nonlinear manner and controls an average output level of the transmitting signal by based on a power supply voltage [[of]] delivered to the high-frequency power amplifier and, in the second mode, controls an average output level of the transmitting signal before the high-frequency power amplifier and amplitude modulates the transmitting signal having the average output level controlled; an amplitude and phase separator for separating a base-band modulated signal into [[an]] a variable voltage, amplitude-modulated signal and a phase-modulated signal; [[and]] an amplifier for amplifying the amplitude-modulated signal to generate an amplified amplitude-modulated signal; and a switch for selectively connecting the amplifier to a DC power supply to receive a substantially constant DC voltage when the high-frequency amplifier is operating in the second mode and to the amplitude and phase separator to receive the variable voltage, amplitude-modulated signal when the high-frequency amplifier is operating in the first mode, wherein the variable voltage, amplified amplitude-modulated signal is to be delivered as supply power transmitted by the amplifier to be delivered as the power supply voltage to the high-frequency amplifier in the first mode, wherein and the amplifier supplies [[a]] the substantially constant DC voltage to be transmitted to the high-frequency amplifier as the power supply voltage in the second mode.

Claim 9 (New): The method of claim 5 further comprising multiplying the variable voltage, amplified amplitude-modulated signal by a gain control signal before the amplified amplitude-modulated signal is supplied to the amplitude-modulated signal amplifier and subsequently delivered as the power supply voltage of the high-frequency power amplifier in the first mode.

Claim 10 (New): The method of claim 8 further comprising a multiplier for multiplying the variable voltage, amplified amplitude-modulated signal by a gain control signal before the amplified amplitude-modulated signal is supplied to the amplitude-modulated signal amplifier and subsequently delivered as the power supply voltage of the high-frequency power amplifier in the first mode.